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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Hiroyuki Iida

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EXAMINER

KLIMOWICZ, WILLIAM JOSEPH

ART UNIT

PAPER NUMBER

2627

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/802,868	Applicant(s) IIDA, HIROYUKI	
	Examiner William J. Klimowicz	Art Unit 2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 January 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

After-Final Amendment

The After-Final Amendment filed on January 28, 2009 has been ENTERED.

Claim Status

Claims 1, 2, 4 and 6-11 are currently pending.

Claims 3 and 5 have been canceled.

Specification

The disclosure is objected to because of the following informalities:

(I) With regard to page 5 (line 12), the phrase “It can say” should be amended to read --It can be said--.

(II) With regard to page 6 (line 19), the word “perform” should be changed to the word --preform--.

Appropriate correction is required.

Drawings

Figure 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled “Replacement Sheet” in the page header (as per 37 CFR

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1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

Claim 1 is objected to because of the following informalities:

With regard to claim 1 (line 3), the phrase “an ultrahigh molecular weight polyethylene, a plastic, and a barrier layer” should be amended, since the plastic layer is actually the “ultrahigh molecular weight polyethylene” and the claim, as presently drafted, seems to imply that there are three distinct layers: **(1)** an ultrahigh molecular weight polyethylene; **(2)** a plastic and **(3)** a barrier layer.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 4, 6, 7 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagai et al. (JP 08-031128 A) in view of Tsubouchi (JP 2002-166401 A).

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As per claim 1, Nagai et al. (JP 08-031128 A) discloses a sliding member (1) comprising a slidable substrate (1) and a pressure-sensitive adhesive layer (2) (e.g., see, *inter alia*, enclosed English-machine translation of Nagai et al. (JP 08-031128 A) at paragraph [0032]) provided on one side thereof, wherein the slidable substrate (1) is a porous form comprising an ultrahigh molecular weight polyethylene (a plastic) (e.g., see, *inter alia*, enclosed English-machine translation of Nagai et al. (JP 08-031128 A) at paragraph [0035, 0036], etc.), wherein the porous form has a porosity of 20-70% (e.g., see, *inter alia*, enclosed English-machine translation of Nagai et al. (JP 08-031128 A) at paragraph [0027], etc.).

As per claim 2, wherein the slidable substrate (1) has a coefficient of friction of 0.2 or lower - see Table 1 (e.g., see, *inter alia*, enclosed English-machine translation of Nagai et al. (JP 08-031128 A) at paragraph [0049]).

As per claim 4, wherein the ultrahigh molecular weight polyethylene has a molecular weight of 500,000 or higher (e.g., see, *inter alia*, enclosed English-machine translation of Nagai et al. (JP 08-031128 A) at paragraph [0011]).

As per claim 1, however, Nagai et al. (JP 08-031128 A) does not expressly disclose a barrier layer is provided between the slidable substrate (1) and the pressure-sensitive adhesive layer (2).

Such barrier layers provided between porous substrate and adhesive layers, in order to prevent the migration of adhesive into the porous substrates, are well known in the laminate art, however.

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As just one example, Tsubouchi (JP 2002-166401 A) discloses a laminate wherein a barrier layer (2) is provided between a porous substrate (1) and an adhesive layer (3) in order to expressly and explicitly “prevent[] an adhesive from infiltration into a surface of a porous substrate.” See abstract of Tsubouchi (JP 2002-166401 A).

As per claim 6, wherein the barrier layer (2) comprises a thermoplastic resin (e.g., see, *inter alia*, enclosed English-machine translation of Tsubouchi (JP 2002-166401 A) at paragraph [0031]).

Given the express teachings and motivations, as espoused by Tsubouchi (JP 2002-166401 A), as is also well known and established in the laminate art, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a barrier layer between the slidable substrate (1) and the pressure-sensitive adhesive layer (2) of Nagai et al. (JP 08-031128 A), in the express and explicit manner as taught and suggested by Tsubouchi (JP 2002-166401 A).

The rationale is as follows: one of ordinary skill in the art would have been motivated to provide a barrier layer between the slidable substrate (1) and the pressure-sensitive adhesive layer (2) of Nagai et al. (JP 08-031128 A), in the express and explicit manner as taught and suggested by Tsubouchi (JP 2002-166401 A) in order to expressly and explicitly “prevent[] an adhesive from infiltration into a surface of a porous substrate.” See abstract of Tsubouchi (JP 2002-166401 A).

The resultant combination of Tsubouchi (JP 2002-166401 A) with Nagai et al. (JP 08-031128 A), would produce Nagai et al. (JP 08-031128 A), as per claim 11, wherein one side of the barrier layer is adjacent to one side of the pressure-sensitive adhesive layer (2) and the other

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side of the barrier layer is adjacent to one side of the slidable substrate (1) - since Tsubouchi (JP 2002-166401 A) expressly teaches providing the barrier layer (2) between the adhesive layer and the porous substrate to minimize the adhesive from infiltrating the porous substrate.

Additionally, as per claim 7, although Nagai et al. (JP 08-031128 A) in view of Tsubouchi (JP 2002-166401 A), remains silent with respect to wherein the thermoplastic resin has a melt viscosity of 5-500 kPa.s, the Examiner maintains that it would have been obvious to one of ordinary skill in the art at the time of the instant invention to satisfy the claimed range(s) and/or dimension(s), particularly in light of the teachings of Tsubouchi (JP 2002-166401 A) as applied to Nagai et al. (JP 08-031128 A) as a whole, through routine optimization/experimentation. “[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation.” *In re Aller*, 105 USPQ 233, 235 (CCPA 1955).

Additionally, with respect to the particular claimed ranges, given the teachings and suggestions of Tsubouchi (JP 2002-166401 A) as applied to Nagai et al. (JP 08-031128 A) for providing a thermoplastic resin barrier layer between a porous substrate and an adhesive layer, using the teachings of Tsubouchi (JP 2002-166401 A) as a demonstrative template, it would have been within the skill of one having ordinary skill in the art to routinely modify the particular viscosity when forming the layer of the thermoplastic barrier layer in the course of routine optimization/experimentation and thereby obtain various standard optimized relationships including those set forth in claim 7 as nothing more than a ***predictable variation*** based the on the overarching teachings of Tsubouchi (JP 2002-166401 A), as just a manner in which to simply control the flow application rate of the barrier layer formed of thermoplastic resin.

Additionally, the law is replete with cases in which when the mere difference between the claimed invention and the prior art is some range, variable or other dimensional limitation within the claims, patentability cannot be found.

It furthermore has been held in such a situation, the Applicant must show that the particular range is critical, generally by showing that the claimed range achieves unexpected results relative to the prior art range. *In re Woodruff*, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936 (Fed. Cir. 1990).

Moreover, the instant disclosure does not set forth evidence ascribing unexpected results due to the claimed dimensions. See *Gardner v. TEC Systems, Inc.*, 725 F.2d 1338 (Fed. Cir. 1984), which held that the dimensional limitations failed to point out a feature which performed and operated any differently from the prior art.

No new or unobvious result is seen to be obtained, given the express teachings and motivations of the applied prior art, and as such, the claimed ranges are seen, absent any unobvious evidence, as nothing more than a ***predictable variation*** based the on such overarching and pertinent teachings of Tsubouchi (JP 2002-166401 A), in light of the general knowledge of an artisan having ordinary skill in the art, with the express rationale provided *supra*. See *KSR Int'l Co. v. Teleflex, Inc.*, No. 04-1350 (U.S. Apr. 30, 2007).

Moreover still, the Supreme Court opined “[w]hen a work is available in one field of endeavor, design incentives and other market forces can prompt variations of it, either in the same field or a different one. If a person of ordinary skill can implement a ***predictable variation***, § 103 likely bars its patentably.” (Emphasis added) 127 S. Ct. 1727, 1740.

The Examiner finds this situation analogous to the optimization of a range or other variable within the claims that flows from the “normal desire of scientists or artisans to improve upon what is already generally known.” *In re Peterson*, 315 F.3d 1325, 1330 (Fed. Cir. 2003) (determining where in a disclosed set of percentage ranges the optimum combination of percentages lies is *prima facie* obvious). As noted above, in *In re Aller*, 220 F.2d 454, 456 (C.C.P.A. 1955), it was held that the discovery of an optimum value of a variable in a known process is usually obvious. See also *In re Boesch*, 617 F.2d 272, 276 (C.C.P.A. 1980) (“[D]iscovery of an optimum value of a result effective variable in a known process is ordinarily within the skill of the art.”); *In re Geisler*, 116 F.3d 1465, 1470 (Fed. Cir. 1997) (“[I]t is not inventive to discover the optimum or workable ranges by routine experimentation.” (quoting *Aller*, 220 F.2d at 456)); *In re Kulling*, 897 F.2d 1147, 1149 (Fed. Cir. 1990) (finding no clear error in Board of Patent Appeals and Interferences’ conclusion that the amount of eluent to be used in a washing sequence was a matter of routine optimization known in the pertinent prior art and therefore obvious).

Claims 8 and 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagai et al. (JP 08-031128 A) in view of Tsubouchi (JP 2002-166401 A) as applied to claims 7 and 1, respectively above, and further in view of Nakanishi (JP 08-034959 A)

See the description of Nagai et al. (JP 08-031128 A) in view of Tsubouchi (JP 2002-166401 A), *supra*.

Nagai et al. (JP 08-031128 A) in view of Tsubouchi (JP 2002-166401 A) disclose all the features as set forth in the rejection, *supra*, except for the features set forth in claims 8-10.

Such claimed features, as applied to barrier layers used in laminates are well known. As just one example, Nakanishi (JP 08-034959 A) further teaches providing a laminate in which a barrier layer (3) is provided between an adhesive layer (4) and a functional layer (2) to minimize the underlying adhesive layer (4) from impairing the functional layer (2), wherein, as per claim 9, wherein the barrier layer has a thickness of 0.01-0.5 mm (see abstract of Nakanishi (JP 08-034959 A)), wherein, as per claim 10, wherein the barrier layer (3) comprises polyethylene or polypropylene (e.g., see, *inter alia*, enclosed English-machine translation of Nakanishi (JP 08-034959 A) at paragraph [0007]).

Moreover still, as per claim 8, Nakanishi (JP 08-034959 A) further suggests using a crosslinked component of the thermoplastic resin layer to facilitate adherence between the barrier layer (3) and the functional layer (2) (e.g., see, *inter alia*, enclosed English-machine translation of Nakanishi (JP 08-034959 A) at paragraphs [0004] and [0007]).

Given the express teachings and motivations, as espoused by Nakanishi (JP 08-034959 A), it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the features set forth in claims 8-10, to the laminate combination of Nagai et al. (JP 08-031128 A) in view of Tsubouchi (JP 2002-166401 A), as exemplified and suggested by Nakanishi (JP 08-034959 A).

The rationale is as follows: one of ordinary skill in the art would have been motivated to provide the features set forth in claims 8-10, to the laminate combination of Nagai et al. (JP 08-031128 A) in view of Tsubouchi (JP 2002-166401 A), as exemplified and suggested by Nakanishi (JP 08-034959 A) in order to provide a well known barrier layer between the functional substrate and the adhesive, to minimize infiltration of the adhesive into the functional

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layer, while also promoting sufficient adherence between the barrier layers the layers of the laminate.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William J. Klimowicz whose telephone number is (571) 272-7577. The examiner can normally be reached on Monday-Friday (7:30AM-6:00PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph H. Feild can be reached on (571) 272-4090. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/William J. Klimowicz/

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Primary Examiner, Art Unit 2627